REMARKS

Claims 1, 8, 9, 18 and 19 rejected on Hansen have been cancelled. Claim 7 has been cancelled as duplicative of claim 2, claim 2 has been rewritten in independent form, and claim 20 amended solely to add the definition of "quality" to the claim. Claims 2-6, 10-17, and 20-26 are in the application and at issue.

Turning first to numbered paragraph 5 of the Office Action, it is believed that the rejection of claims 20-26 under §112 has been overcome by the addition of a definition of the term quality as it appears in other independent claims to claim 20. Notification to that effect is solicited.

The apparent objection to claim 1 set forth in numbered paragraph 6 of the Office Action is no longer believed applicable in view of the adoption of the Examiner's kind suggestion for amendment. However, the amendment has been incorporated in claim 2 which has been rewritten in independent form in view of the cancellation of claim 1.

The indication of allowability that claims 3-6, 12-17 and 21-26 contain allowable subject matter is noted with appreciation.

The cancellation of claims 1, 8, 9, 18 and 19 obviates the §102(b) rejection based on Hansen.

The rejection under §102(a) on Watanabe et al is traversed. It is axiomatic that for an anticipation rejection to be proper, <u>every</u> structural element

of the rejected claim must be found in a single reference, here Watanabe et al. That test, however, is not met in this case. The claims rejected on Watanabe require that the refrigerant be delivered to the suction line heat exchange on its way to the compressor such that the quality entering the suction line heat exchanger is less than 1 and the quality leaving the heat exchanger is substantially equal to 1. Given the definition of quality as the weight ratio of the mass of refrigerant vapor to the combined mass of refrigerant vapor and liquid refrigerant, this means that the refrigerant that is introduced into the suction line heat exchanger must be at least in part in the liquid phase and that the refrigerant that has passed through the suction line heat exchanger to the compressor must be substantially entirely in the vapor phase.

Watanabe et al includes an accumulator or trap 5 between his evaporator and the suction line heat exchanger. He clearly states in column 6, beginning at line 19 that only the gaseous or vapor phase portion of the refrigerant passes to the suction line heat exchanger. That, in turn, means that the quality of refrigerant headed to the suction line heat exchanger is 1. In contrast, in the claimed invention, the quality is less than 1 so there can be no anticipation.

As far as any possible case of obviousness is concerned based on the Watanabe patent, none is seen to exist. Watanabe et al contains no clear discussion of the efficiency improvements that are achieved by the various

qualities specified by the Applicants and consequently, cannot be seen to suggest those improvements or any reason why modification of Watanabe et al's qualities to those claimed by the Applicants would be made for any reason, let alone improved efficiency.

It is therefore considered that claims 2, 10, 11 and 20, the only claims remaining in the case and rejected on Watanabe, are clearly allowable and that the rejection should be withdrawn. And in view of the fact that all other remaining claims are dependent directly or indirectly on claims improperly rejected on Watanabe for the reasons above, and generally have been indicated as containing allowable subject matter, it is believed that the application is in allowable form. Notification to that effect is solicited.

Respectfully submitted,

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